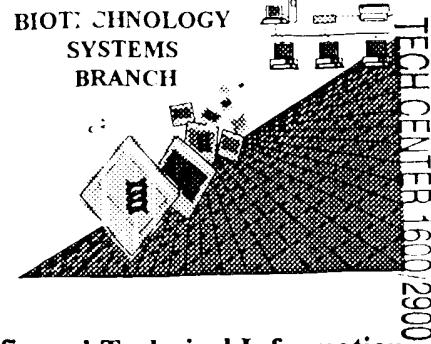


RAW SEQUENCE LISTING ERROR REPORT



AUG 02 2001

RECEIVED

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/500,135A

Source: 1644

Date Processed by STIC: 7/9/2001

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) **INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
- 2) **TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO).

Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>

1644

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/500,135A

DATE: 07/09/2001
 TIME: 13:21:49

Input Set : A:\GC527C1seqlist.txt
 Output Set: N:\CRF3\07092001\I500135A.raw

3 <110> APPLICANT: Estell, David
 4 Harding, Fiona
 6 <120> TITLE OF INVENTION: PROTEINS PRODUCING AN ALTERED IMMUNOGENIC RESPONSE AND
 7 METHODS OF MAKING AND USING THE SAME
 9 <130> FILE REFERENCE: A-68893/DJB/DAV
 11 <140> CURRENT APPLICATION NUMBER: 09/500,135A
 12 <141> CURRENT FILING DATE: 2000-02-08
 14 <150> PRIOR APPLICATION NUMBER: 09/060,872
 15 <151> PRIOR FILING DATE: 1998-04-15
 17 <160> NUMBER OF SEQ ID NOS: 236
 19 <170> SOFTWARE: PatentIn Ver. 2.1
 21 <210> SEQ ID NO: 1
 22 <211> LENGTH: 1495
 23 <212> TYPE: DNA
 24 <213> ORGANISM: Bacillus amyloliquefaciens
 26 <220> FEATURE:
 27 <221> NAME/KEY: mat_peptide
 28 <222> LOCATION: (417)..(1495)
 30 <220> FEATURE:
 31 <221> NAME/KEY: CDS
 32 <222> LOCATION: (96)..(1244)
 34 <220> FEATURE:
 35 <221> NAME/KEY: misc_feature
 36 <222> LOCATION: (582)..(584)
 37 <223> OTHER INFORMATION: The nnn at positions 582 through 584 which in a
 38 preferred embodiment (aat) is to code for
 39 asparagine, but which may also code for proline.
 41 <220> FEATURE:
 42 <221> NAME/KEY: misc_feature
 43 <222> LOCATION: (585)..(587)
 44 <223> OTHER INFORMATION: The nnn at positions 585 through 587 which in a
 45 preferred embodiment (cct) is to code for proline,
 46 but which may also code for asparagine.
 48 <220> FEATURE:
 49 <221> NAME/KEY: misc_feature
 50 <222> LOCATION: (597)..(599)
 51 <223> OTHER INFORMATION: The nnn at positions 597 to 599 which in a
 52 preferred embodiment (aac) is to code for
 53 asparagine, but which may also code for aspartic acid.
 55 <220> FEATURE:
 56 <221> NAME/KEY: misc_feature
 57 <222> LOCATION: (678)..(680)
 58 <223> OTHER INFORMATION: The nnn at positions 678 through 680 which in a
 59 preferred embodiment (gca) is to code for
 60 alanine, but which may also code for serine.
 62 <220> FEATURE:
 63 <221> NAME/KEY: misc_feature

4-5
 MF
 Does Not Comply
 Corrected Diskette Needed:

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/500,135A

DATE: 07/09/2001
TIME: 13:21:49

Input Set : A:\GC527C1seqlist.txt
Output Set: N:\CRF3\07092001\I500135A.raw

64 <221> LOCATION: (681)..(683)
65 <223> OTHER INFORMATION: The nnn at positions 681 through 683 which in a
66 preferred embodiment (tca) is to code for serine,
67 but which may also code for alanine.
68 <220> FEATURE:
69 <221> NAME/KEY: misc_feature
70 <222> LOCATION: (708)..(710)
71 <223> OTHER INFORMATION: The nnn at positions 708 through 710 which in a
72 preferred embodiment (gct) is to code for
73 alanine, but which may also code for aspartic acid.
74 <220> FEATURE:
75 <221> NAME/KEY: misc_feature
76 <222> LOCATION: (711)..(713)
77 <223> OTHER INFORMATION: The nnn at positions 711 through 713 which in a
78 preferred embodiment (gac) is to code for
79 aspartic acid, but which may also code for alanine.
80 <220> FEATURE:
81 <221> NAME/KEY: misc_feature
82 <222> LOCATION: (888)..(890)
83 <223> OTHER INFORMATION: The nnn at positions 888 through 890 which in a
84 preferred embodiment (act) is to code for
85 threonine, but which may also code for serine.
86 <220> FEATURE:
87 <221> NAME/KEY: misc_feature
88 <222> LOCATION: (891)..(893)
89 <223> OTHER INFORMATION: The nnn at positions 891 through 893 which in a
90 preferred embodiment (tcc) is to code for
91 serine, but which may also code for threonine.
92 <220> FEATURE:
93 <221> NAME/KEY: misc_feature
94 <222> LOCATION: (1167)..(1169)
95 <223> OTHER INFORMATION: The nnn at positions 1167 through 1169 which in a
96 preferred embodiment (gaa) is to code for
97 glutamic acid, but which may also code for glutamine.
98 <400> SEQUENCE: 1
99 ggtctactaa aatattatttc catactatac aattaataca cagaataatc tgtctattgg 60
100 ttattctgca aataaaaaaaaa aggagaggat aaaga atg aga ggc aaa aaa gta 113
101 Met Arg Gly Lys Lys Val
102 -105
103 tgg atc agt ttg ctg ttt gct tta gcg tta atc ttt acg atg gcg ttc 161
104 Trp Ile Ser Leu Leu Phe Ala Leu Ala Ile Phe Thr Met Ala Phe
105 -100 -95 -90
106 ggc agc aca tcc tct gcc cag gcg gca ggg aaa tca aac ggg gaa aag 209
107 Gly Ser Thr Ser Ser Ala Gln Ala Ala Gly Lys Ser Asn Gly Glu Lys
108 -85 -80 -75 -70
109 aaa tat att gtc ggg ttt aaa cag aca atg acg acg atg agc gcc gct 257
110 Lys Tyr Ile Val Gly Phe Lys Gln Thr Met Ser Thr Met Ser Ala Ala
111 -65 -60 -55
112 aag aag aaa gat gtc att tct gaa aaa ggc ggg aaa gtg caa aag caa 305

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/500,135A

DATE: 07/09/2001
TIME: 13:21:49

Input Set : A:\GC527C1seqlist.txt
Output Set: N:\CRF3\07092001\I500135A.raw

124	Lys	Lys	Lys	Asp	Val	Ile	Ser	Glu	Lys	Gly	Gly	Lys	Val	Gln	Lys	Gln		
125				-50				-45					-40					
127	ttc	aaa	tat	gta	gac	gca	gtc	tca	gct	aca	tta	aac	gaa	aaa	gct	gta	353	
128	Phe	Lys	Tyr	Val	Asp	Ala	Ala	Ser	Ala	Thr	Leu	Asn	Glu	Lys	Ala	Val		
129				-35				-30					-25					
131	aaa	gaa	ttg	aaa	aaa	gac	ccg	agc	gtc	gtc	tac	gtt	gaa	gaa	gat	cac	401	
132	Lys	Glu	Leu	Lys	Lys	Asp	Pro	Ser	Val	Ala	Tyr	Val	Glu	Glu	Asp	His		
133				-20				-15					-10					
135	gta	gca	cat	gct	gac	ccg	cag	tcc	gtg	cct	tac	ggc	gta	tca	caa	att	449	
136	Val	Ala	His	Ala	Tyr	Ala	Gln	Ser	Val	Pro	Tyr	Gly	Val	Ser	Gln	Ile		
137	-5			-1	1				5			10						
139	aaa	gcc	cct	gtc	ctg	cac	tct	caa	ggc	tac	act	gga	tca	aat	gtt	aaa	497	
140	Lys	Ala	Pro	Ala	Leu	His	Ser	Gln	Gly	Tyr	Thr	Gly	Ser	Asn	Val	Lys		
141				15				20			25							
143	gta	gct	gtt	atc	gac	agg	atc	gat	tct	tct	cat	cct	gat	tta	aag		545	
144	Val	Ala	Val	Ile	Asp	Ser	Gly	Ile	Asp	Ser	Ser	His	Pro	Asp	Leu	Lys		
145				30				35			40							
W-->	147	gta	gca	ggc	gga	gcc	agc	atg	gtt	cct	tct	gaa	aca	nnn	nnn	ttc	caa	593
W-->	148	Val	Ala	Gly	Gly	Ala	Ser	Met	Val	Pro	Ser	Glu	Thr	Xaa	Xaa	Phe	Gln	
149				45				50			55							
W-->	151	gac	nnn	aac	tct	cac	gga	act	cac	gtt	gcc	ggc	aca	gtt	gct	ctt		641
W-->	152	Asp	Xaa	Asn	Ser	His	Gly	Thr	His	Val	Ala	Gly	Thr	Val	Ala	Ala	Leu	
153				60				65			70			75				
W-->	155	aat	aac	tca	atc	ggt	gta	tta	ggc	gtt	gct	cca	agc	nnn	nnn	ctt	tac	689
W-->	156	Asn	Asn	Ser	Ile	Gly	Val	Leu	Gly	Val	Ala	Pro	Ser	Xaa	Xaa	Leu	Tyr	
157					80				85			90						
W-->	159	gct	gta	aaa	gtt	ctc	ggt	nnn	nnn	ggt	tcc	ggc	caa	tac	agc	tgg	atc	737
W-->	160	Ala	Val	Lys	Val	Leu	Gly	Xaa	Xaa	Gly	Ser	Gly	Gln	Tyr	Ser	Trp	Ile	
161					95				100			105						
163	att	aac	gga	atc	gag	tgg	gct	atc	gca	aac	aat	atg	gac	gtt	att	aac		785
164	Ile	Asn	Gly	Ile	Glu	Trp	Ala	Ile	Ala	Asn	Asn	Met	Asp	Val	Ile	Asn		
165					110				115			120						
167	atg	agc	ctc	ggc	gga	cct	tct	ggt	tct	gtc	gtc	tta	aaa	gct	gca	gtt		833
168	Met	Ser	Leu	Gly	Gly	Pro	Ser	Gly	Ser	Ala	Ala	Leu	Lys	Ala	Ala	Val		
169					125				130			135						
171	gat	aaa	gcc	gtt	gca	tcc	ggc	gtc	gtc	gtt	gct	gca	ggc	ggt	aac		881	
172	Asp	Lys	Ala	Val	Ala	Ser	Gly	Val	Val	Val	Val	Ala	Ala	Ala	Gly	Asn		
173					140				145			150			155			
W-->	175	gaa	ggc	nnn	nnn	ggc	agc	tca	agc	aca	gtg	ggc	tac	cct	ggt	aaa	tac	929
W-->	176	Glu	Gly	Xaa	Xaa	Gly	Ser	Ser	Ser	Thr	Val	Gly	Tyr	Pro	Gly	Lys	Tyr	
177						160				165			170					
179	cct	tct	gtc	att	gca	gta	ggc	gtc	gtc	gac	agc	agc	aac	caa	aga	gca		977
180	Pro	Ser	Val	Ile	Ala	Val	Gly	Ala	Val	Asp	Ser	Ser	Asn	Gln	Arg	Ala		
181					175				180			185						
183	tct	tcc	tca	agc	gta	gga	cct	gag	ctt	gat	gtc	atg	gca	cct	ggc	gtt		1025
184	Ser	Phe	Ser	Ser	Val	Gly	Pro	Glu	Leu	Asp	Val	Met	Ala	Pro	Gly	Val		
185					190				195			200						
187	tct	atc	caa	agc	acg	ctt	cct	gga	aac	aaa	tac	ggg	gct	tac	aac	ggt		1073
188	Ser	Ile	Gln	Ser	Thr	Leu	Pro	Gly	Asn	Lys	Tyr	Gly	Ala	Tyr	Asn	Gly		

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/500,135A

DATE: 07/09/2001
TIME: 13:21:49

Input Set : A:\GC527C1seqlist.txt
Output Set: N:\CRF3\07092001\I500135A.raw

189	205	210	215	
191	acg tca atg gca tct ccg cac gtt gcc gga gcg gct gct ttg att ctt			1121
192	Thr Ser Met Ala Ser Pro His Val Ala Gly Ala Ala Ala Leu Ile Leu			
193	220	225	230	235
W-->	195 tct aag cac ccg aac tgg aca aac act caa gtc cgc agc agt tta nnn			1169
W-->	196 Ser Lys His Pro Asn Trp Thr Asn Thr Gln Val Arg Ser Ser Leu Xaa			
197	240	245	250	
199	aac acc act aca aaa ctt ggt gat tct ttc tac tat gga aaa ggg ctg			1217
200	Asn Thr Thr Lys Leu Gly Asp Ser Phe Tyr Tyr Gly Lys Gly Leu			
201	255	260	265	
203	atc aac gta cag gcg gca gct cag taa aacataaaaa accggccttg			1264
204	Ile Asn Val Gln Ala Ala Ala Gln			
205	270	275		
207	gccccgggg ttttttatt tttttccctt cgcgttca atccgctcca taatcgacgg			1324
209	atgggtccctt ctgaaaattt taacgagaaa cggcgggttg acccggctca gtcccgtaac			1384
211	ggccaaagttcc taaaacgtct caatcgccgc ttcgggttt cccgtcaatgcgtta			1444
213	acggtcggcg ggtttccctt gataccggga gacggcattc gtaatcgat c			1495
216	<210> SEQ ID NO: 2			
217	<211> LENGTH: 382			
218	<212> TYPE: PRT			
219	<213> ORGANISM: Bacillus amyloliquefaciens			
221	<220> FEATURE:			
222	<221> NAME/KEY: VARIANT			
223	<222> LOCATION: (163)...(163)			
224	<223> OTHER INFORMATION: Xaa = Asn or Pro			
226	<220> FEATURE:			
227	<221> NAME/KEY: VARIANT			
228	<222> LOCATION: (164)...(164)			
229	<223> OTHER INFORMATION: Xaa = Pro or Asn			
231	<220> FEATURE:			
232	<221> NAME/KEY: VARIANT			
233	<222> LOCATION: ((167)...(167) (168). (168))			
234	<223> OTHER INFORMATION: Xaa = Asn or Asp			
236	<220> FEATURE:			
237	<221> NAME/KEY: VARIANT			
238	<222> LOCATION: (195)...(195)			
239	<223> OTHER INFORMATION: Xaa = Ala or Ser			
241	<220> FEATURE:			
242	<221> NAME/KEY: VARIANT			
243	<222> LOCATION: (196)...(196)			
244	<223> OTHER INFORMATION: Xaa = Ser or Ala			
246	<220> FEATURE:			
247	<221> NAME/KEY: VARIANT			
248	<222> LOCATION: (205)...(205)			
249	<223> OTHER INFORMATION: Xaa = Ala or Asp			
251	<220> FEATURE:			
252	<221> NAME/KEY: VARIANT			
253	<222> LOCATION: (206)...(206)			
254	<223> OTHER INFORMATION: Xaa = Asp or Ala			

Asp is at 167 (see next page)

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/500,135A

DATE: 07/09/2001
TIME: 13:21:49

Input Set : A:\GC527C1seqlist.txt
Output Set: N:\CRF3\07092001\I500135A.raw

256 <220> FEATURE:
257 <221> NAME/KEY: VARIANT
258 <222> LOCATION: (265)...(265)
259 <223> OTHER INFORMATION: Xaa = Thr or Ser
261 <220> FEATURE:
262 <221> NAME/KEY: VARIANT
263 <222> LOCATION: (266)...(266)
264 <223> OTHER INFORMATION: Xaa = Ser or Thr
266 <220> FEATURE:
267 <221> NAME/KEY: VARIANT
268 <222> LOCATION: (358)...(358)
269 <223> OTHER INFORMATION: Xaa = Gln or Glu
271 <400> SEQUENCE: 2
272 Met Arg Gly Lys Lys Val Trp Ile Ser Leu Leu Phe Ala Leu Ala Leu
273 1 5 10 15
274 Ile Phe Thr Met Ala Phe Gly Ser Thr Ser Ser Ala Gln Ala Ala Gly
275 20 25 30
276 Lys Ser Asn Gly Glu Lys Lys Tyr Ile Val Gly Phe Lys Gln Thr Met
277 35 40 45
278 Ser Thr Met Ser Ala Ala Lys Lys Lys Asp Val Ile Ser Glu Lys Gly
279 50 55 60
280 Gly Lys Val Gln Lys Gln Phe Lys Tyr Val Asp Ala Ala Ser Ala Thr
281 65 70 75 80
282 Leu Asn Glu Lys Ala Val Lys Glu Leu Lys Lys Asp Pro Ser Val Ala
283 85 90 95
284 Tyr Val Glu Glu Asp His Val Ala His Ala Tyr Ala Gln Ser Val Pro
285 100 105 110
286 Tyr Gly Val Ser Gin Ile Lys Ala Pro Ala Leu His Ser Gln Gly Tyr
287 115 120 125
288 Thr Gly Ser Asn Val Lys Val Ala Val Ile Asp Ser Gly Ile Asp Ser
289 130 135 140
290 Ser His Pro Asp Leu Lys Val Ala Gly Gly Ala Ser Met Val Pro Ser
291 145 150 155 160
W--> 292 Glu Thr Xaa Xaa Phe Gln Asp Xaa Asn Ser His Gly Thr His Val Ala
293 165 170 175
294 Gly Thr Val Ala Ala Leu Asn Asn Ser Ile Gly Val Leu Gly Val Ala
295 180 185 190
W--> 296 Pro Ser Xaa Xaa Leu Tyr Ala Val Lys Val Leu Gly Xaa Xaa Gly Ser
297 195 200 205
298 Gly Gln Tyr Ser Trp Ile Ile Asn Gly Ile Glu Trp Ala Ile Ala Asn
299 210 215 220
300 Asn Met Asp Val Ile Asn Met Ser Leu Gly Gly Pro Ser Gly Ser Ala
301 225 230 235 240
302 Ala Leu Lys Ala Ala Val Asp Lys Ala Val Ala Ser Gly Val Val Val
303 245 250 255
W--> 304 Val Ala Ala Ala Gly Asn Glu Gly Xaa Xaa Gly Ser Ser Ser Thr Val
305 260 265 270
306 Gly Tyr Pro Gly Lys Tyr Pro Ser Val Ile Ala Val Gly Ala Val Asp
307 275 280 285

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/500,135A

DATE: 07/09/2001

TIME: 13:21:50

Input Set : A:\GC527C1seqlist.txt

Output Set: N:\CRF3\07092001\I500135A.raw

L:147 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:148 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:151 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:152 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:155 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:156 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:159 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:160 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:175 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:176 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:195 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:196 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:292 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:296 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:304 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:316 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2